Current Water Conditions in Massachusetts
February 12, 2015

- January precipitation was above normal
- January streamflows were normal
- January groundwater levels were normal
- January reservoir levels were normal

Precipitation Conditions

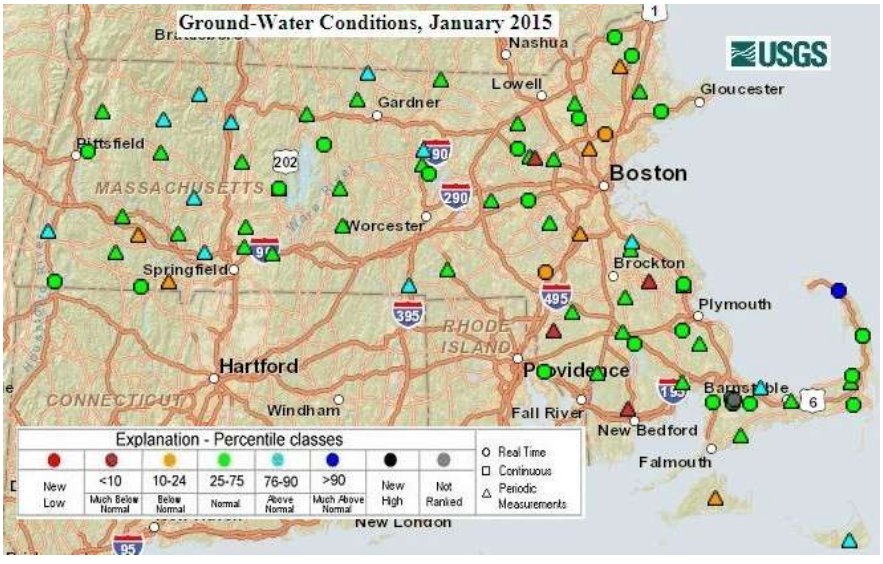
Estimated January state-wide average precipitation is 4.48 inches, which is 127 percent of the long-term average for the month. Precipitation in the regions of Massachusetts ranged from 137 percent (Cape Cod and islands) to 118 percent (Central) of the long term average. January 2015 was the 47th wettest January in the last 120 years in Massachusetts according to the National Climate Data Center. A table of January 2015 estimated precipitation statistics, based on preliminary precipitation data from the Department of Conservation and Recreation and National Weather Service precipitation monitoring networks, is attached. A map at the back of this report shows the areal distribution of January rainfall

January's weather was highlighted by a record blizzard on January 26 to 28. It was the largest snowfall from a single storm for Worcester and the sixth largest storm for Boston. Many areas of eastern Massachusetts reported more than 30-inches of snow from the event. That event has been followed by 2 additional significant snow storms in early February that have set new records for consecutive day snowfall amounts. Severe public transportation disruptions and infrastructure damage, such as roof collapses, have resulted.

Water stored in the snow pack is estimated to be 5 to 8 inches in most of northeastern Massachusetts by NOAA's National Operational Hydrology Center. This snow pack will have to be monitored in the coming weeks as it could pose a flooding problem in weather conditions resulting in rapid snowmelt.

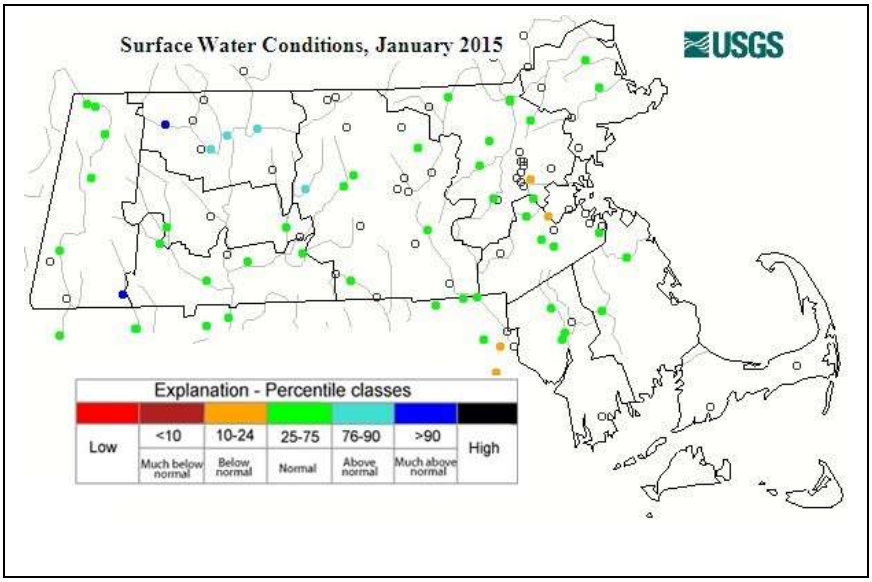
Ground-Water Levels

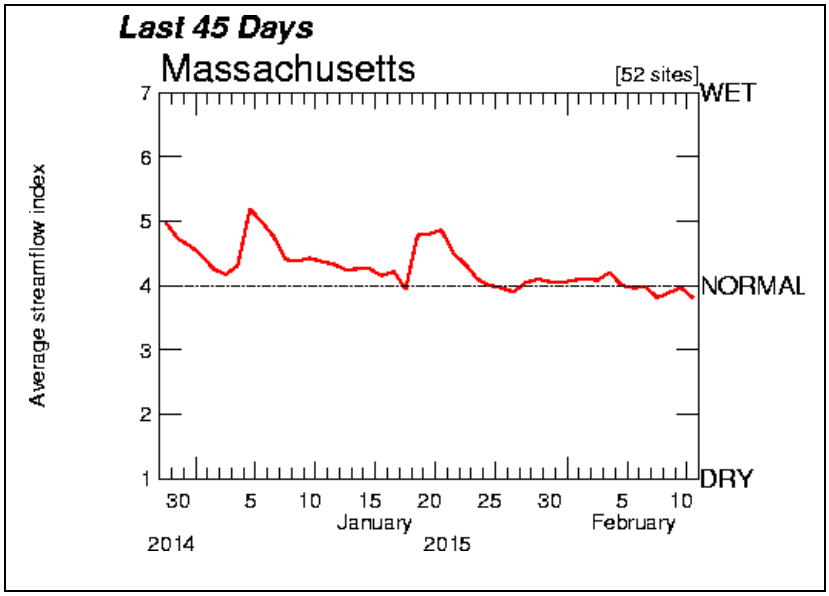
Based on preliminary data, ground-water levels reported by the U.S. Geological Survey at the end of January or beginning of February were generally normal state wide. An assessment of ground-water conditions in the Massachusetts drought regions is shown in a table at the end of this report. All regions are assessed as having normal groundwater levels. The USGS Groundwater Conditions for the end of January 2015 can be viewed at the web site: http://groundwaterwatch.usgs.gov/StateMapsNet.asp?ncd=crn&sc=25



Streamflow

Average January 2015 streamflows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program were generally normal state-wide. The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of December 29, 2014 to February 11, 2015. Stream flows were generally in the high normal range during early January and declined to near normal in late January and early February. Late January precipitation events were almost all snow with little or no surface runoff. The graph is a composite of 52 real-time gages across the state with a long period of record. This streamflow plot can be found at: http://waterwatch.usgs.gov/index.php?map_type1=pa07d&map_type2=&map_type3=&map_type4=&web_type=pa07d%2Cplot&state=ma&huc=us&xinfo=&map_type=real&group_idx=1&region_cd=ma&group_idx_changed=1&sel_nm=map_type1&sel_va=real





KEY:

1 = New record low for day
2 = < 10th percentile
3 = 10th – 24th percentile
4 = 25th – 74th percentile
5 = 75th – 89th percentile
6 = ≥ 90th percentile
7 = New record high for day

Water Supply Reservoir Levels

Selected surface water reservoir percent-full values for water supply sources provided by water suppliers are listed below. These levels are generally normal for this time of year. The reservoir percent-full values listed are for the end of January or the beginning of February 2015.

January/February 2015 Massachusetts Reservoir Status

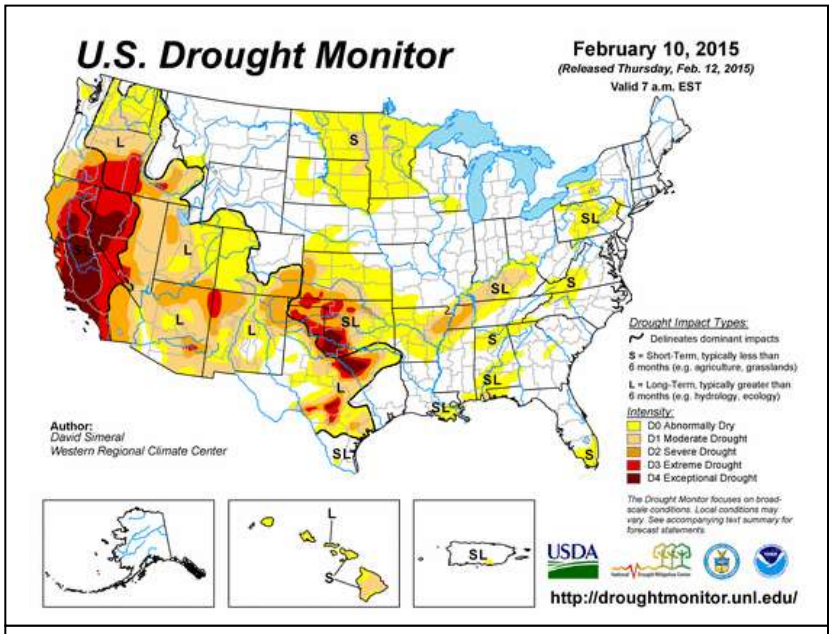
Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	94.5	Beverly/Salem	99
Worcester	97	Lynn	75
Cobble Mt./ Springfield	90	Taunton/New Bedford/Assawompsett	85

Note: NA Indicates data not available for this report

Drought Indices/Forecasts

US Drought Monitor

The National Drought Mitigation Center's (NDMC's) February 10, 2015 Drought Monitor Map shown at right indicates no drought conditions in all of New England.

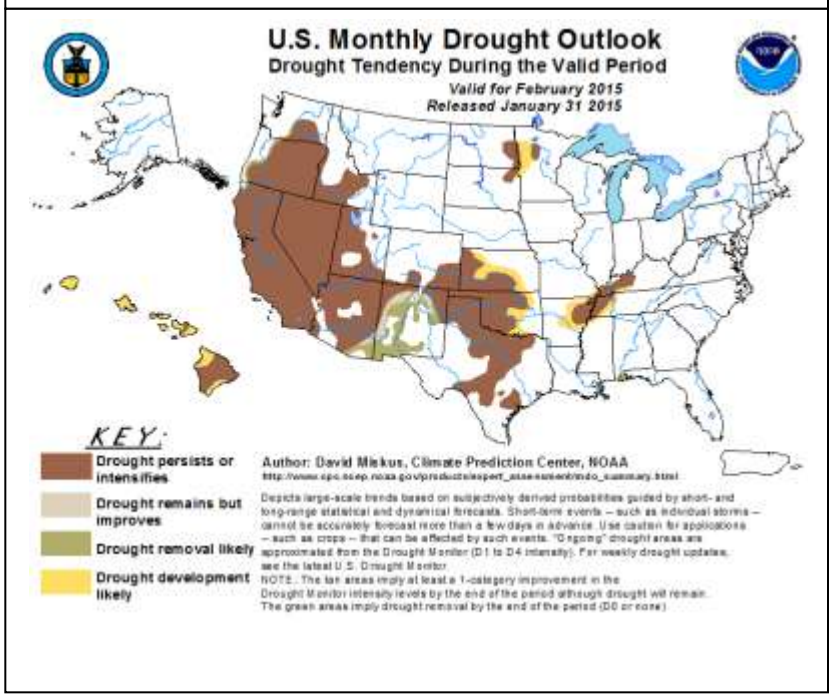


Standardized Precipitation Index (SPI)

All the Standardized Precipitation Index values for the regions used for the Massachusetts Drought Management Plan are in the normal range.

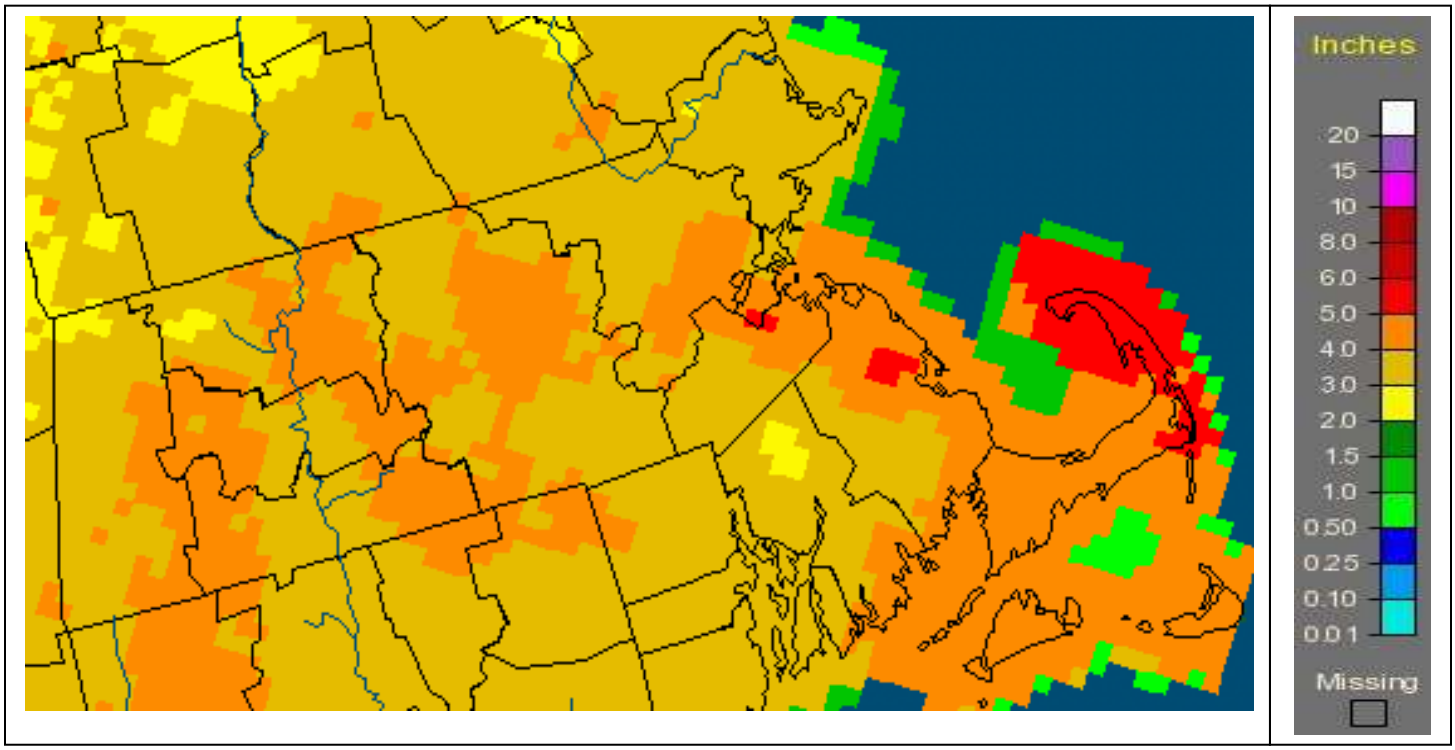
NWS/NOAA's Climate Prediction Center

The U.S. Monthly Drought Outlook for February (shown at the right) forecasts that drought conditions will probably not develop during February 2015. The seasonal drought outlook (not shown) predicts that there will likely be no development of drought conditions through the end of April in Massachusetts.



Extended Forecasts

A glancing blow from a coastal low may bring 1 to 4-inches of snow to southeast MA Thursday into Friday with the lower amounts to the west. This will be followed by mostly clear and extremely cold weather into Saturday. Late Saturday into Sunday another low may bring blizzard conditions and coastal flooding to eastern sections of Massachusetts. Yet another in this series of storms is probable for mid week. The National Weather Service Climate Prediction Center's extended 6 to 10- and 8 to 14-day forecasts are for above normal precipitation and much below normal temperatures. The 1-month forecast is for normal precipitation and below normal temperatures. The 3-month forecast is for normal precipitation and temperatures. The NWS Climate Prediction Center Information can be found at: http://www.cpc.noaa.gov/index.php



http://water.weather.gov/precip/

TOTAL RAINFALL
JANUARY 2015

GENERAL WATER CONDITIONS IN MASSACHUSETTS - JANUARY 2015

EOEEA and MEMA DROUGHT MANAGEMENT PLAN REGIONS

Massachusetts Regions	Surface-Water Conditions	Ground-Water Conditions
Cape and Islands	ND	Normal
Southeast	Normal	Normal
Northeast	Normal	Normal
Central	Normal	Normal
Connecticut River	Normal	Normal
Western	Normal	Normal

Note: Surface- and ground-water conditions for individual streamflow-gaging stations and wells may differ from general conditions. ND, no data

This report was prepared by the Massachusetts Department of Conservation and Recreation. Data were obtained from the sources described in the report and may be preliminary in nature. Additional information, previous and future water conditions reports can be found on our web site:
http://www.mass.gov/eea/agencies/dcr/water-res-protection/water-data-tracking/precipitation-composite-current-conditions.html